

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/18/2008 has been entered.

Claims 21-40 are pending. No claims have been withdrawn. Claims 1-20 have been cancelled.

Claim Objections

Claim 21 is objected to because the recitation in line 7 of “groove formed on a pipe” should be --groove formed in a pipe--, since grooves are formed “in” objects and not “on” objects.

Claim 31 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. It is recited in lines 1-2, “wherein the ring has an outer cone-shaped surface” (emphasis added). In claim 21, line 5-6, it is recited, “wherein the mounting ring is elastically expandable and is integrally formed with an outer cone-shaped surface” (emphasis added). The emphasized recitations of claims 31 and 21 place the limitation of requiring of the same structure.

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Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28-30, 34, 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 28, it is recited in lines 1-2, “wherein the ring is formed with a circular recess for the gasket”. It is recited in claim 21, line 3, “a resilient mounting ring having a circular recess for receiving the gasket”. It is unclear if the Applicant intends there to be two such “circular recess” structures in the ring “for receiving the gasket”. Since Applicant's disclosure, see Applicant's Figure 2 for example, discloses only a single "circular recess" structure in the ring, the Examiner is interpreting the claim 28 recited structure of a “circular recess” as being the same “circular recess” structure recited in claim 21.

In regard to claim 34, it is recited in lines 1-3, “wherein the mounting flange is formed with an inner cone-shaped surface matching the cone-shaped surface of the ring” (emphasis added). It is recited in claim 21, line 4, “a mounting flange having a cone shaped inner surface”. It is unclear if the emphasized structures are intended to be the same cone-shaped structures or if the Applicant intending to claim two (2) such structures.

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In regard to claim 36, the limitation "the series of bores " is recited in line 2. There is insufficient antecedent basis for this limitation in the claim. The "series of bores" is introduced in the claims language in claim 35.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-24, 26, 28, and 31-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Manton (U.S. 3,652,110). The Examiner notes that the embodiment as shown in Figure 3, see Attachment C, is used in the following rejections.

In regard to claim 21, Manton discloses pipe coupling comprising:

a single gasket (noted in Figure 3, see Attachment C) ,

a resilient mounting ring (noted in Figure 3, see Attachment C - the Examiner notes that the term “resilient” is a subjective term that can be defined as: capable of returning to an original shape after being compressed) having a circular recess (plainly observed in Figure 3, see Attachment C) for receiving the gasket, and

a mounting flange (noted in both Figures 3 and 1, see Attachments C and B, respectively) having a cone shaped inner surface (noted in Figure 3, see Attachment C),

wherein the mounting ring is elastically expandable (the Examiner notes that the term “elastic” simply means: easily resuming original shape after being stretched or

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expanded; the mounting ring of Manton can be elastically expanded via the application of heat) and is integrally formed with an outer cone-shaped surface (noted in Figure 3, see Attachment C) and with an inner rib (noted in Figure 3, see Attachment C), the rib being adapted to fit into a circumferential groove formed on a pipe upon elastically expanding the ring over the pipe to hold the ring affixed to the pipe, wherein the pipe coupling is for connecting the pipe to a counter-flange associated with a second pipe in a sealed manner when the ring is tightened towards the counter-flange.

The Examiner notes that the product-by-process recitation of “integrally formed” in claim 21, line 5, has little affect on the patentability of the product itself. A comparison of the recited process with the prior art processes does NOT serve to resolve the issue concerning the patentability of the product. *In re Fessman*, 489 F2d 742, 180 U.S.P.Q. 324 (CCPA 1974). Whether a product is patentable depends on whether it is known in the art or it is obvious, and is not governed by whether the process by which it is made is patentable. *In re Klug*, 333 F2d 905, 142 U.S.P.Q. 161 (CCPA 1964). In an ex parte case, product-by-process claims are not construed as being limited to the product formed by the specific process recited. *In re Hirao et al.*, 535 F2d 67, 190 U.S.P.Q. 15, see footnote 3 (CCPA 1976).

The Examiner notes that it has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation, but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138. As such, the recitation in claim 21, lines 6-8, of “the rib being adapted to fit into a circumferential groove formed on a pipe upon elastically expanding the ring over the pipe to hold the ring affixed to the pipe” (emphasis added) is given little

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patentable weight. The “mounting ring” of Manton is capable of being elastically expanded and, therefore, is further capable of being used in an environment as indicated in the noted recitation.

The Examiner notes that the recitation in claim 21, lines 8-10, of “wherein the pipe coupling is for connecting the pipe to a counter-flange associated with a second pipe in a sealed manner when the ring is tightened towards the counter-flange” (emphasis added) simply indicates an intended use of the “pipe coupling”. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). As such, the noted recitation is given little patentable weight.

In regard to claim 22, Manton further discloses wherein the ring is split (as observed in Figure 5, see Attachment C).

In regard to claim 23, Manton further discloses wherein the ring is split by a cut extending in an axial plane thereof (an arbitrarily chosen axial plane has been chosen that meets the claim limitation, see Attachment C Examiner's drawing for clarification).

In regard to claim 24, Manton further discloses wherein the ring is split by a cut extending in a non-axial plane thereof (since “extending” is sufficiently broad as to encompass a surface of the split in the ring merely traversing through a plane, an arbitrarily chosen non-axial plane has been chosen - see Attachment C Examiner's drawing for clarification).

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In regard to claim 26, Manton further discloses wherein the inner rib is a circular rib (the rib is part of a circular in aspect ring, see Figure 5 in Attachment C, therefore the rib is circular).

In regard to claim 28, Manton further discloses wherein the ring is formed with a circular recess for the gasket (the recess the gasket is in as observed in Figure 3, see Attachment C), and the gasket is elastomeric (as indicated by the material representative cross-hatching in Figure 3, see Attachment C).

In regard to claim 31, Manton further discloses wherein the ring has an outer cone-shaped surface (as observed in Figure 3, see Attachment C).

In regard to claim 32, Manton further discloses (wherein the cone angle is between 150-300 degrees relative to the axis of the ring (the cone appears to be approximately 180 degrees as observed in Figure 1, see Attachment B).

In regard to claim 33, Manton further discloses wherein an upright shoulder extends around the end of the cone-shaped surface (as observed in Figure 3, see Attachment C).

In regard to claim 34, Manton further discloses wherein the mounting flange is formed with an inner cone-shaped surface matching the cone-shaped surface of the ring (as plainly observed in Figure 3, see Attachment C).

In regard to claim 35, Manton further discloses wherein the mounting flange is formed with a series of bores through which tightening bolts are adapted to pass (as plainly observed in Figure 1, see Attachment B).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manton as applied to claims 21-24, 26, 28, and 31-35 above, and further in view of Robinson (U.S. 5,779,285).

In regard to claim 25, Manton discloses the claimed invention except for plastic material being used to make the ring. However, Robinson teaches a pipe coupling wherein the ring (30) is made of plastic materials to allow functioning in a corrosive environment (column 2, lines 10-13). As Robinson relates to pipe coupling materials choice, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the ring of Manton of plastic materials as taught by Robinson to allow functioning in a corrosive environment.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manton as applied to claims 21-26, 28, and 31-35, above.

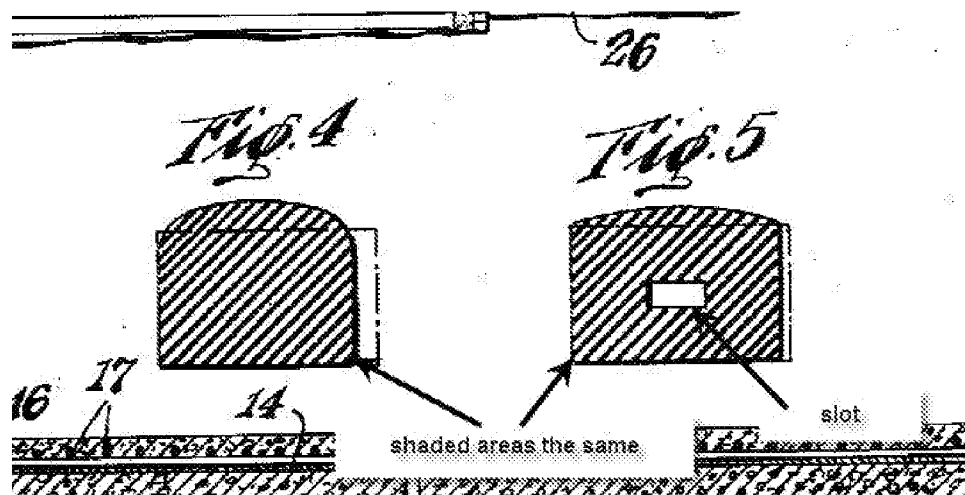
In regard to claim 27, Manton discloses the claimed invention in the embodiment of Figure 3 except for a generally saw-tooth shape of the rib, the saw-tooth shape having a right-angled side and a beveled side. However, Manton teaches a generally saw-tooth shape of the rib, the saw-tooth shape having a right-angled side and a beveled side in the embodiment of Figure 1. As such, it would have been obvious to one of ordinary skill in

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the art at the time the invention was made to simply modify the rib of the pipe coupling embodiment disclosed in Manton in Figure 3 by simply using the known alternative rib shape as taught by Manton in Figure 1, since simple substituting known alternative structures is well within the skill of one in the art and one would have full expectations of success.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manton as applied to claims 21-28, and 31-35, above, in view of Trickey (U.S. 1,976,589).

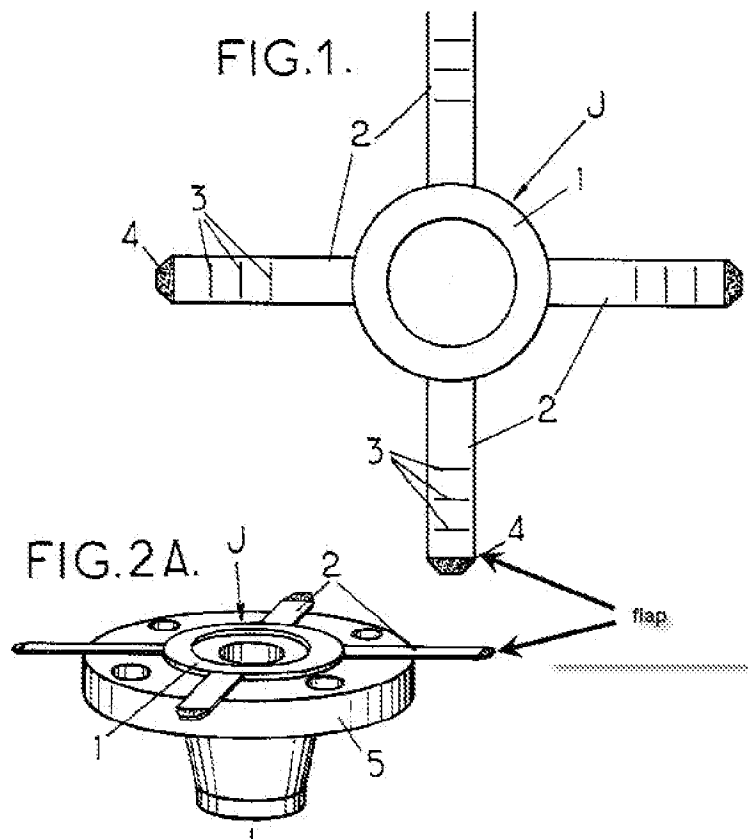
In regard to claim 29, Manton discloses the claimed invention except for the gasket having an inner slot. Trickey teaches in Figure 5, below, a pipe joint gasket having an inner slot to allow a larger gasket perimeter for a given volume of gasket material (column 4, line 146, through column 5, line 13). As Trickey relates to gaskets, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the gasket of Manton with an inner slot as taught by Trickey to allow a larger gasket perimeter for a given volume of material.



(marked Trickey Figures 4 and 5)

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manton in view of Trickey as applied to claims 21-29, and 31-35 above, and further in view of Loth (U.S. 6,367,803).

In regard to claim 30, Manton in view of Trickey provide for the claimed invention except for the gasket being formed with a thin flap. Loth teaches a gasket in marked Figures 1 and 2A, below, with a thin lip to support the gasket centered prior to assembly of the pipe connection (column 1, lines 63-65). As relates to gaskets, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the gasket of Manton in view of Trickey with a thin lip as taught by Loth to support the gasket centered prior to assembly of the pipe connection.



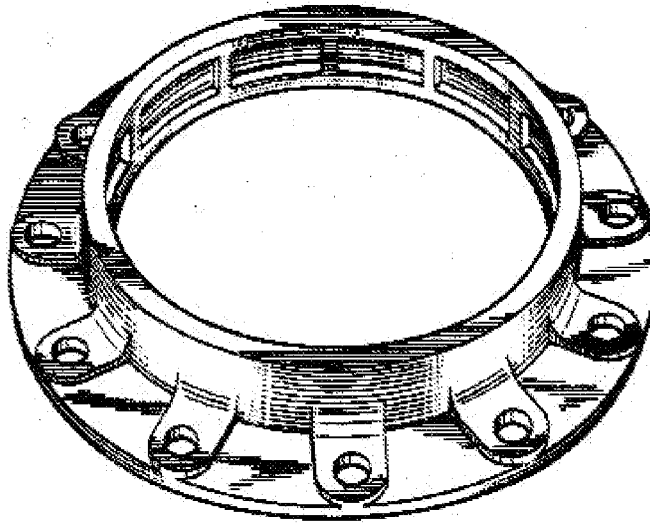
(Loth Figure 1 and Figure 2A)

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manton as applied to claims 21-35 above, and further in view of Milot et al (U.S. Des. 284,022).

In regard to claim 36, Manton discloses the claimed invention except for arcuate projections partly surrounding the series of bores (the "series of bores" being the mounting flange bores the bolts are placed within, see Figure 1 in Attachment B). Milot et al teach a flange in Figure 1, below, with arcuate projections partly surrounding the bores to buttress the flange against tensional bending when the bolts are tightened. As relates to flanges, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the flange of Manton with arcuate projections

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partly surrounding the bores as taught by Milot et al to buttress the flange against tensional bending when the bolts are tightened.

*Fig. 1*

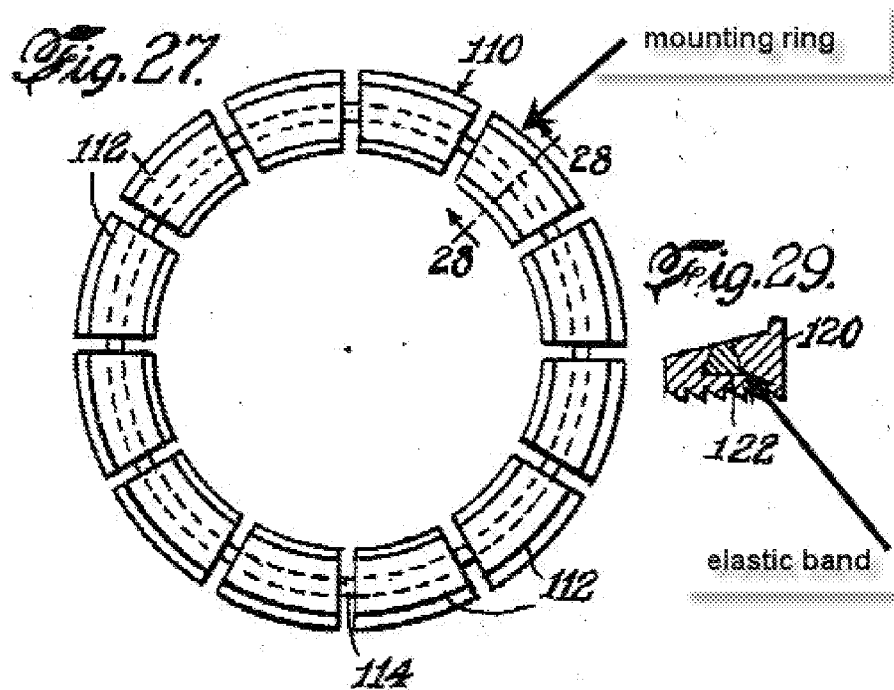
(Milot et al Figure 1)

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manton as applied to claims 21-36 above, in view of Risley (U.S. 2,779,610).

In regard to claim 37, Manton discloses the claimed invention except for multiple ring segments being held together by an elastic band. Risley teaches a pipe coupling with a multi-segment mounting ring in Figure 27, below, with an elastic band (122 as observed in Figure 29. below) holding the segments together to allow the segments to be moved radially inwardly into engagement with the pipe surface when compressed (column 6, lines 33-40). As relates to multi-segment mounting rings, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the

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mounting ring of Manton with of multiple segments and an elastic band as taught by Risley to allow the segments to be moved radially inwardly into engagement with the pipe surface when compressed.



(marked Risley Figures 27 and 29)

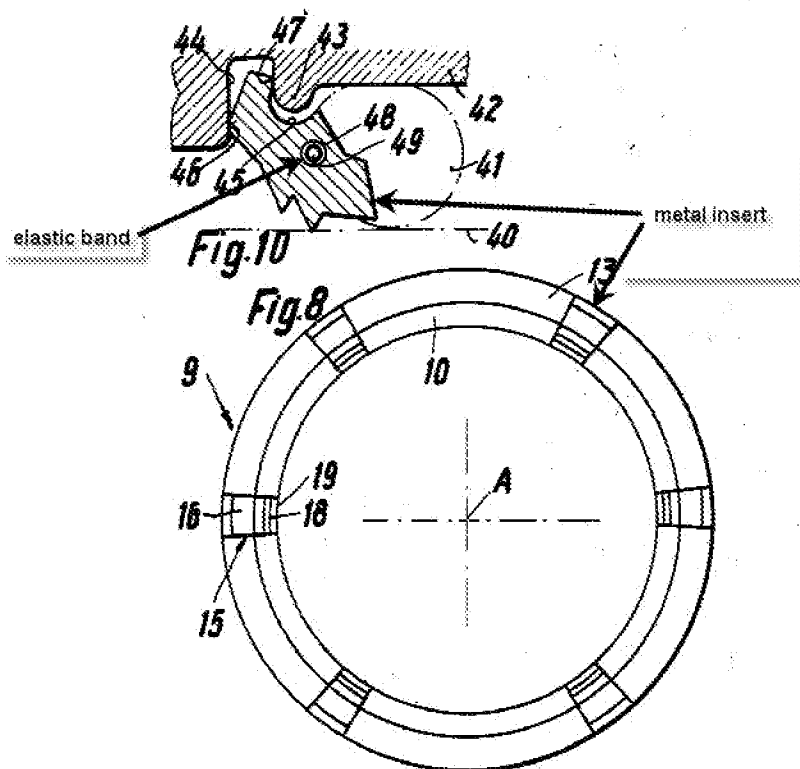
Claims 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manton in view of Risley as applied to claims 21-37, above, and further in view of Seiler (U.S. 2,779,610).

In regard to claim 38, Manton in view of Risley provide for the claimed invention except for metal inserts being interposed between adjacent segments. Seiler in Figures 8 and 10, below, teach placing metal inserts (metal as shown by the crosshatching in Figure 8) as an anti-thrust provision in rings of pipe connections to secure the male end against thrust (column 1, lines 1-2, and column 1, line 68, through column 2, line 1). As relates to pipe connection rings, it would have been obvious to one having ordinary skill in the art

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at the time the invention was made to provide the segmented ring as provided by Manton in view of Risley with metal inserts interposed between adjacent segments as taught by Seiler to secure the male end against thrust.

In regard to claim 39, Seiler further teaches that the segments and inserts be held together by an elastic band threaded therethrough to secure the metal segments in the ring (column 6, lines 12-26). As Seiler relates to pipe connection rings, it would have been obvious to one having ordinary skill in the art at the time the invention was made to hold the segments and inserts of the segmented ring provided by Manton in view of Risley by an elastic band threaded therethrough as taught by Seiler to secure the metal segments in the segmented ring.



(marked Seiler Figures 8 and 10)

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Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manton as applied to claims 21-39, above. Manton discloses the claimed invention except for explicitly stating that the mounting ring being made of sheet metal. Manton does show that the ring is made of metal in Figure 3, see Attachment C. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the mounting ring of sheet metal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design. *In re Leshin*, 125 USPQ 416.

Response to Arguments

Applicant's arguments in the reply filed 03/18/2008 with respect to claims 21-40 have been considered but are moot in view of the new ground(s) of rejection. New grounds of rejection are due to the increased scope of the independent claim 21, i.e. the change in recitation to only positively claim the constituent parts of a gasket, a mounting flange, and a mounting ring. See above rejections for the specifics of the rejections, specifically the prior art of record of Martin (U.S. 3,284,112) and Manton (U.S. 3,652,110).

The Examiner notes that the Applicant's arguments in page 5 of the reply filed 03/18/2008 fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The Applicant should note that it is required in the replies to the most recent Office action to

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specifically point out which recited features in the claims overcomes the prior art of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAY R. RIPLEY whose telephone number is (571)272-7535. The examiner can normally be reached on 01:00 P.M. - 8:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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05 JUN 2008

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